

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A method of increasing the total oil content in a plant organism or a tissue, organ, part, cell or propagation material thereof, comprising
 - a) transgenically expressing an oil synthesis enhancing protein in a starting plant organism or in a starting tissue, organ, part, cell or propagation material thereof so that a transgenic plant organism or a transgenic tissue, organ, part, cell or propagation material thereof is obtained, and
 - b) selecting said transgenic plant organism or said transgenic tissue, organ, part, cell or propagation material thereof in which the total oil content is increased by contrasting to or comparing with said starting plant organism or said starting tissue, organ, part, cell or propagation material thereof.
2. (Currently amended) The method as claimed in of claim 1, wherein the oil synthesis enhancing protein is encoded by a nucleic acid sequence selected from the group consisting of:
 - a) a nucleic acid sequence comprising a nucleotide sequence which is at least 60% identical to the nucleic acid sequence of SEQ ID NO : 1, ~~SEQ ID NO : 3 or SEQ ID NO : 5;~~
 - b) a nucleic acid sequence comprising a fragment of at least 30 nucleotides of a nucleic acid sequence comprising the nucleotide sequence of SEQ ID NO :1, ~~SEQ ID NO :3 or SEQ ID NO :5;~~
 - c) a nucleic acid sequence which encodes a polypeptide comprising an amino acid sequence having at least about 60% identical to the amino acid sequence of SEQ ID NO : 2, ~~SEQ ID NO :4 or SEQ ID NO :6~~ and
 - d) a nucleic acid sequence which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO: 2, ~~SEQ ID NO :4 or SEQ ID NO :6~~ or wherein the fragment comprises at least 10 contiguous amino acid residues of the amino acid sequence of SEQ ID NO : 2, ~~SEQ ID NO :4 or SEQ ID NO :6~~.
3. (Previously presented) A method as claimed in claim 1, wherein the plant is an oil crop.

4. (Previously presented) A method as claimed in claim 1, wherein the total oil content in the seed of said plant organism is increased.

5. (Currently amended) An expression cassette comprising, in combination with a regulatory sequence, a nucleic acid sequence selected from the group consisting of:

- a) a nucleic acid sequence comprising a nucleotide sequence which is at least 60% identical to the nucleotide sequence of SEQ ID NO : 1, ~~SEQ ID NO : 3 or SEQ ID NO : 5,~~
- b) a nucleic acid sequence comprising a fragment of at least 30 nucleotides of a nucleic acid sequence comprising the nucleotide sequence of SEQ ID NO : 1, ~~SEQ ID NO : 3 or SEQ ID NO : 5,~~
- c) a nucleic acid sequence which encodes a polypeptide comprising an amino acid sequence having at least about 60% identical to the amino acid sequence of SEQ ID NO : 2, and ~~SEQ ID NO : 4 or SEQ ID NO : 6, or~~
- d) a nucleic acid sequence which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO : 2, ~~SEQ ID NO : 4 or SEQ ID NO : 6~~ wherein the fragment comprises at least 10 contiguous amino acid residues of the amino acid sequence of SEQ ID NO : 2, ~~SEQ ID NO : 4 or SEQ ID NO : 6~~

wherein said regulatory sequence is capable of mediating expression of said nucleic acid sequence in a plant to increase the oil content in said plant.

6. (Currently amended) An expression cassette according to of claim 5, wherein said nucleic acid sequence encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO : 2, ~~SEQ ID NO : 4 or SEQ ID NO : 6.~~

7. (Currently amended) An expression cassette as claimed in of claim 5, wherein the regulatory sequence comprises a seed-specific promoter.

8. (Currently amended) A genetically modified plant organism or tissue, organ, part, cell or propagation material thereof having increased oil content, comprising a polypeptide as defined in SEQ ID NO : 2, ~~SEQ ID NO 4 or SEQ ID NO 6~~ or an expression cassette as claimed in claim 5.

9. (Original) A genetically modified plant organism as claimed in claim 8, wherein the plant organism is selected from the group of the oil crops consisting of *Borvago officinalis*, *Brassica campestris*, *Brassica napus*, *Brassica rapa*, *Cannabis sativa*, *Carthamus tinctorius*, *Cocos nucifera*, *Crambe abyssinica*, *Cuphea* species, *Elaeis guinensis*, *Elaeis oleifera*, *Glycine max*, *Gossypium hirsutum*, *Gossypium barbadense*, *Gossypium herbaceum*, *Helianthus annuus*, *Linum usitatissimum*, *Oenothera biennis*, *Olea europaea*, *Oryza sativa*, *Ricinus communis*, *Sesamum indicum*, *Triticum* species, *Zea mays*, walnut and almond.

10. (Cancelled)

11. (Withdrawn) A method of producing oils, fats, free fatty acids, free fatty acids or derivatives thereof, wherein said method comprises extracting oils, fats, free fatty acids or derivatives thereof from the genetically modified plant organism or tissue, organ, part, cell or propagation material thereof according to claim 8.

12. (Currently amended) The method ~~as claimed in~~ of claim 2, wherein the nucleic acid sequence which encodes the oil synthesis enhancing protein ~~comprising~~ comprises an amino acid sequence of SEQ ID NO : 2, ~~SEQ ID NO : 4 or SEQ ID NO : 6~~.

13. (New) The method of claim 2, wherein the nucleic acid sequence which encodes the oil synthesis enhancing protein comprises a nucleotide sequence having at least 90% identity to the nucleic acid sequence of SEQ ID NO: 1, or encodes a polypeptide comprising an amino acid sequence having at least 90% identity to the amino acid sequence of SEQ ID NO : 2.

14. (New) The method of claim 1, wherein the total oil content of the plant organism or a tissue, organ, part, cell or propagation material thereof is increased by 5%.

15. (New) The method of claim 1, wherein the total oil content of the plant organism or a tissue, organ, part, cell or propagation material thereof is increased by 10%.

16. (New) A genetically modified plant organism or tissue, organ, part, cell or propagation material thereof produced by the method of claim 1, wherein the total oil content of the plant organism or a tissue, organ, part, cell or propagation material thereof is increased by 5%.

17. (New) A genetically modified plant organism or tissue, organ, part, cell or propagation material thereof obtained from the method of claim 1, wherein the total oil content of the plant organism or a tissue, organ, part, cell or propagation material thereof is increased by 10%.

18. (New) The genetically modified plant organism or tissue, organ, part, cell or propagation material thereof of claim 8, wherein the total oil content of the plant organism or a tissue, organ, part, cell or propagation material thereof is increased by 5%.

19. (New) The genetically modified plant organism or tissue, organ, part, cell or propagation material thereof of claim 8, wherein the total oil content of the plant organism or a tissue, organ, part, cell or propagation material thereof is increased by 10%.